CLAIMS:

1. A method comprising:

accumulating pilot symbols of a first wireless signal;

accumulating non-pilot symbols of the first wireless signal; and

calculating a weighted sum of the accumulated pilot symbols and the accumulated non-pilot symbols to estimate power of the first wireless signal.

2. The method of claim 1, wherein accumulating pilot symbols comprises coherently accumulating a number of pilot symbols corresponding to a slot by summing each of the number of pilot symbols and squaring the sum of the number of pilot symbols.

3. The method of claim 2, wherein accumulating the non-pilot symbols comprises non-coherently accumulating a number of non-pilot symbols corresponding to a slot by squaring each of the number of non-pilot symbols and summing the squares of the number of non-pilot symbols.

4. The method of claim 1, wherein accumulating the non-pilot symbols comprises non-coherently accumulating a number of non-pilot symbols corresponding to a slot by squaring each of the number of non-pilot symbols and summing the squares of the number of non-pilot symbols.

5. The method of claim 1, further comprising comparing the weighted sum to a target value and generating a power control signal based on the comparison.

6. The method of claim 5, further comprising controlling transmission power of a wireless communication device based on the power control signal.

7. The method of claim 5, further comprising controlling transmission power of a base station based on the power control signal.

8. The method of claim 5, further comprising wirelessly communicating a second wireless signal to control transmission power of a wireless communication device, wherein the second wireless signal includes the power control signal.

9. The method of claim 5, further comprising wirelessly communicating a second wireless signal to control transmission power of a base station, wherein the second wireless signal includes the power control signal.

10. The method of claim 1, further comprising determining a weight factor and calculating the weighted sum by summing the accumulated pilot symbols with a result of the weight factor multiplied by the accumulated non-pilot symbols.

11. The method of claim 1, wherein determining the weight factor comprises multiplying a number of pilot symbols in the accumulated pilot symbols by a constant.

12. The method of claim 11, wherein the constant is equal to approximately 0.5.

13. The method 11, wherein determining the weight factor comprises selecting the weight factor from a lookup table.

14. The method 11, wherein determining the weight factor comprises generating the weight factor using an algorithm.

15. The method of claim 1, wherein accumulating non-pilot symbols of the first wireless signal comprises separately accumulating a first number of non-pilot symbols corresponding to a slot and accumulating a second number of non-pilot symbols corresponding to the slot.

16. The method of claim 15, wherein accumulating the first number of non-pilot symbols corresponding to the slot comprises coherently accumulating the first

number of non-pilot symbols corresponding to the slot, and wherein accumulating the second number of non-pilot symbols corresponding to the slot comprises non-coherently accumulating the second number of non-pilot symbols corresponding to the slot.

17. A computer-readable medium carrying program code that when executed,

accumulates pilot symbols of a first wireless signal;

accumulates non-pilot symbols of the first wireless signal; and

calculates a weighted sum of the accumulated pilot symbols and the accumulated non-pilot symbols to estimate power of the first wireless signal.

18. The computer readable medium of claim 17, wherein the program code when executed:

accumulates pilot symbols by coherently accumulating a number of pilot symbols corresponding to a slot by summing each of the number of pilot symbols and squaring the sum of the number of pilot symbols, and

accumulates non-pilot symbols by non-coherently accumulating a number of non-pilot symbols corresponding to a slot by squaring each of the number of non-pilot symbols and summing the squares of the number of non-pilot symbols.

19. An apparatus comprising:

a receiver that receives a wireless signal,

a demodulator that demodulates individual chips of the wireless signal,

a symbol generator that groups results of the demodulation into control symbols, wherein the control symbols include pilot symbols and non-pilot symbols, and

an estimator that calculates an estimate of the power of the wireless signal by separately accumulating the pilot symbols and the non-pilot symbols and calculating a weighted sum of the accumulated pilot symbols and accumulated non-pilot symbols.

20. The apparatus of claim 19, further comprising:

an antenna coupled to the receiver;

a rotator that adjusts the frequency of the wireless signal prior to demodulation; and

a digital signal processor that processes the control symbols.

21. The apparatus of claim 19, further comprising:

a comparator that compares the estimate to a target value to determine whether the power of the wireless signal should be increased or decreased; and

a power command generator that generates a command signal to adjust the power of the wireless signal.

22. The apparatus of claim 21, further comprising a transmitter that transmits a second signal to instruct a device that sent the first signal to adjust its power according to the command signal.

23. The apparatus of claim 19, wherein the apparatus forms part of a base station in a wireless communication system.

24. The apparatus of claim 19, wherein the apparatus forms part of a wireless communication device in a wireless communication system.

25. The apparatus of claim 19, further comprising:

a number demodulators that demodulate individual chips of the wireless signal received via a number of paths,

a number of symbol generators that group results of the demodulations into control symbols, wherein the control symbols include pilot symbols and non-pilot symbols, and

a number of estimators that respectively calculate estimates of the power of the wireless signal corresponding to each of the number of paths by accumulating the

pilot symbols, accumulating the non-pilot symbols and calculating a weighted sum of the accumulated pilot symbols and accumulated non-pilot symbols.

26. The apparatus of claim 25, further comprising:

a register that stores and combines the estimates; and

a comparator that compares the combined estimates to a target value to determine whether the power of the wireless signal should be increased or decreased.

27. A wireless communication system comprising:

a wireless communication device that sends a first signal encoded with pilot and non-pilot symbols; and

a base station that receives the first signal, and estimates power of the first signal by separately accumulating the pilot symbols and the non-pilot symbols and calculating a weighted sum of the accumulated pilot and non-pilot symbols.

28. The wireless communication system of claim 27, wherein the base station compares the estimated power of the first signal to a target value and sends a second signal back to the wireless communication device to adjust transmit power of the wireless communication device accordingly.

29. A wireless communication system comprising:

a base station that sends a first signal encoded with pilot and non-pilot symbols; and

a wireless communication device that receives the first signal, and estimates power of the first signal by separately accumulating the pilot symbols and the non-pilot symbols and calculating a weighted sum of the accumulated pilot and non-pilot symbols.

30. The wireless communication system of claim 29, wherein the wireless communication device compares the estimated power of the first signal to a target

value and sends a second signal back to the base station to adjust transmit power of the base station accordingly.